Insects in Firewood

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What’s that noise in my firewood?
Grinding, chewing noises coming from a pile of firewood inside or outside the home can startle people. These noises may be quite loud and may sound like an animal is in the pile, chewing on the wood. Inspecting the pile to discover the source of these noises may reveal small piles of sawdust around and on the logs. The cause of these disturbing sounds and the sawdust piles can be wood-boring or bark beetles, although other insects such as termites, carpenter ants and wasp larvae may also be found in firewood.

In nature, wood-boring and bark beetles thin out stressed, injured or dying trees in a forest. This is part of the natural wood decomposition process. These insects can remain in logs when trees are cut down for firewood.

Most insects found in firewood rarely infest household furnishings or the structural timbers of a home, except for termites (Figure 1), carpenter ants and powderpost beetles. Firewood insects rarely attack living trees in the yard, unless the trees are stressed, unhealthy or the same species of tree as the infested wood. Infested firewood is still usable for burning, but should not be moved from the area in which it was harvested. For example, don’t take it camping. This will reduce spreading the pests to other trees and locations.

Common insects found in firewood in Nevada
Sometimes the insects found in firewood are beneficial and are eating wood borer larvae. You may see small 1/10 to ½ inch black or red and black wasps around the firewood pile. These may be Braconid or Ichneumonid wasps. You may also see snakefly larvae (Figure 2) and clerid beetles.

Some of the insects commonly found in pine firewood are several types of roundheaded wood-boring beetles such as longhorned borers.

Figure 1: Western drywood termites, ⅛ inches long, can damage the structure of a home.
PHOTO: PEST AND DISEASES IMAGE LIBRARY, BUGWOOD.ORG

Figure 2: A snakefly larva, 1 ⅜ inches long, eats wood borer larvae.
PHOTO: W. CRANSHAW, COLORADO STATE UNIVERSITY, BUGWOOD.ORG
An example of this is the California prionus (Figures 3 and 4). Longhorned borers often have long antennae that may exceed the length of their bodies. Longhorned borer larvae, which can be up to 3¼ inches long, are segmented white to cream-colored grubs with round brownish heads. The larvae make the noise in the wood as they feed on it. They leave behind the boring dust. They make winding or zigzagging tunnels beneath the bark and into the wood.

Flatheaded borers, also called metallic wood borers because of their metallic sheen, are usually smaller than roundheaded borers. Their larvae are slender, white segmented grubs with flattened brownish heads and prominent jaws (Leatherman and Cranshaw, 2009). Both roundheaded and flatheaded borers may be present in wood for more than a year.

In addition, you may see bark beetles of various types such as fir engraver beetle, Jeffrey pine beetle, mountain pine beetle and pinyon engraver beetle (Figure 6).

With bark beetles, firewood may have globs of pitch on the bark with tunnels under the bark. Tiny holes (beetle exit holes, Figure 6) may be evident on the surface of the bark.

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Figure 3: Adult California prionus, 3 inches long.
Photo: D. Owen, California Department of Forestry and Fire Protection, Bugwood.org

Figure 4: California prionus with larvae.
Photo: D. Ghent, USDA Agriculture Research Service, Bugwood.org

Figure 5: New house borer, 19/32 to 29/32 inches long, with tunnel in wood.
Photo: W. Brewer, Auburn University, Bugwood.org

Figure 6: Adult bark beetle with exit hole. Adults range from ½ to ¼ inches in size.
Photo: J. Knight, Nevada Department of Agriculture

Figure 7: Do not stack firewood next to a tree.
Photo: J. Knight, Nevada Department of Agriculture
Uncommon invasive beetles to be on the lookout for in firewood

The USDA Forest Service, Nevada Division of Forestry, Nevada Department of Agriculture and University of Nevada Cooperative Extension are working together to raise awareness of destructive exotic insects that could destroy our urban and native trees if they become established in Nevada.

So far, few, if any are present in Nevada, so we want to keep them out or spot them early when they arrive. Finding these pests early and treating them immediately is critical to eradicating these invaders before they kill our trees. If you see either the Asian longhorned beetle (Figures 8 and 9), or the emerald ash borer (Figure 10), think an insect looks suspicious, or you see D-shaped holes in ash, honeylocust or oak trees, call Jeff Knight, State Entomologist with the Nevada Department of Agriculture, 775-353-3767, or Gail Durham, Forest Health Specialist with Nevada Division of Forestry, 775-684-2513.

If you have to remove a tree with insects and want to use it for firewood, here are a few guidelines:

**NEVER USE INSECTICIDES OR CHEMICALS ON FIREWOOD.** Insecticides do not penetrate tree bark to where the borers are feeding and volatile fumes given off when the wood is burned may be toxic.

**DRY THE WOOD OUT**
- Cut the wood into 12-inch lengths.
- Split pieces larger than 8 inches in diameter
- Remove the bark from each log to eliminate borers that feed directly beneath the bark. This prevents reinestation and speeds drying.
- Keep wood exposed to direct sun to speed drying.
- Turn the wood periodically to expose all surfaces to the sun.
- Stack wood so air can flow through it.
- Keep piles away from live trees (Figure 7).

**OR**

**KILL THE BEETLES**
- Pile the wood keeping the pile just a few logs high and cover it with at least 4 mil thick clear plastic.
- Bury all edges of the plastic with soil and avoid tearing it.
- Leave the pile covered for three months during the hot weather and longer in the cooler seasons.
- Keep piles away from live trees (Figure 7).
- Keep firewood outside until ready for use and use up infested wood rapidly.
- Any wood suspected of containing termites or carpenter ants should be removed from the property and taken to a landfill.

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**Figure 8: Watch out for exotic invasive Asian longhorned beetle larvae.**
Photo: K. R. Law, USDA APHIS PPQ, Bugwood.org

**Figure 9: Watch out for exotic invasive Asian longhorned beetle adults, 1¼ inches long.**
Photo: K. R. Law, USDA APHIS PPQ, Bugwood.org

**Figure 10: Watch out for exotic invasive emerald ash borer adults, 1½ inches long, and D-shaped exit holes in ash, honeylocust or oak trees.**
Photo: J. Spokosky, NY State Department of Agriculture and Markets, Bugwood.org
How do I avoid insects emerging from firewood in my home?
Carefully inspect firewood for insects and try not to cut or buy wood that is already infested with insects. Buy seasoned wood from local sources. This wood will have dry, loose bark and should have been aged for at least a year. After a year, most borers and bark beetles will have exited the wood, particularly if it was debarked.

If wood is known to be infested, burn the wood before the adult beetles begin to emerge in mid-July to reduce further infestation.

What do I do if insects emerge inside my home?
Firewood insects are not hazardous to people, other than an occasional pinch of the skin if handled. They are primarily a nuisance. They rarely survive indoors.

Handpick the insects or vacuum them up. Bag the vacuum contents, secure the bag and throw it away in the trash. Or, drown the insects in a bucket of soapy water.

What can you do to avoid spreading exotic invasive insects?
Don’t move firewood from where it was cut to another area. Firewood often carries invasive insects and diseases that can kill stressed native and ornamental trees. New infestations of these insects can destroy our native and urban forests, reduce property values and cost a great deal to monitor, manage and control. While you may not see any visible signs of infestation, insect eggs can be very tiny and yet may destroy an entire ecosystem. Never assume that firewood that “looks safe” is safe to move. Buy firewood where you burn it.

Be aware of which trees could be victims. Become familiar with the ornamental and native trees in your yard, neighborhood and area. If they look like they are suffering, check out why.

For more information on keeping exotic borers and bark beetles from destroying our native forests and urban trees, see University of Nevada Cooperative Extension Special Publication “Exotic Insects Invading Nevada’s Trees.”

REFERENCES

Nature Conservancy under the auspices of the Continental Dialogue on Non-native Forest Insect and Diseases. www.dontmovefirewood.org
